CLEAN HARBORS ENVIRONMENTAL SERVICES, INC. LAND DISPOSAL RESTRICTION NOTIFICATION FORM LDR-1

Manifest	No.			
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THE HAZARDOUS WASTES IDENTIFIED ON THE HAZARDOUS WASTE MANIFEST IDENTIFIED ABOVE AND BEARING THE EPA HAZARDOUS WASTE THE HAZARDOOD MASTES THE TREATMENT UNDER THE CODES LISTED BELOW ARE RESTRICTED WASTES WHICH ARE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT UNDER THE CODES LISTED DELOW ARE RESTRICTED WASTES WHITE THE THE LAND DISPOSAL RESTRICTIONS, 40 CFR PART 268 AND RCRA SECTION 3004 (D). IN ACCORDANCE WITH 40 CFR 268.7(a) (2), THE EPA WASTE CODE, WASTE SUBCATEGORY, AND TREATABILITY GROUPS, AS APPLICABLE, ARE INCLUDED BELOW.

INSTRUCTIONS -- COMPLETE ALL SECTIONS. REFER TO PAGE 3 OF THIS FORM FOR KEY TERMS/DEFINITIONS.

- Column 1 Line Item: Enter the manifest line item number (e.g., 11a) that corresponds to the waste code(s).
- Column 2 Waste Codes/Subcategory: Check off all applicable waste codes. For D001 through D043, also check applicable subcategory; for F001 through F005, check applicable constituents.
- Column 3 Wastewater/Non-wastewater: Check off "WW" for wastewater and "Non-WW" for non-wastewaters.
- Column 4 LDR Handling Code: Circle the appropriate handling code, as follows:
 - 1 = The waste is a characteristic hazardous waste D001, D002, D003, D004-D011, or D018-43 which is intended for The waste is a characteristic mazardous waste book, book, book, book, book or class I SDWA system. Underlying Hazardous treatment/disposal in a CWA system, CWA-equivalent system, or Class I SDWA system. Underlying Hazardous Constituents (UHC's) are NOT required to be identified.
 - 1A = The waste is a characteristic hazardous waste D001 High TOC Ignitable Liquids Subcategory (i.e., greater than or equal to 10% TOC). Pursuant to 40 CFR 268.40, the waste must be treated using organic recovery (RORGS) or combustion (CMBST) technology. UHC's are NOT required to be identified.
 - 2 = The waste is a characteristic hazardous waste D001 (other than High TOC Ignitable Liquids), D002, D003 Explosive, Water Reactive or Other Reactive subcategory, D004-D011, D012-17 non-wastewater, or D018-43 which is intended for treatment/disposal in a non-CWA system, non-CWA-equivalent system, or non-Class I SDWA system located in the United States. All UHC's which are reasonably expected to be present must be identified, except for D001 waste that is intended to be treated using organic recovery (RORGS) or combustion (CMBST) technologies. Identify UHC's by completing Sections I and IV of CHI Form LDR-1 Addendum and attach completed
 - 3 The waste is a characteristic (i.e., D-code) or listed (i.e., F-, K-, U-, or P-code) hazardous waste which is intended for export and treatment/disposal at a facility located outside the United States. LDR treatment standards do not apply to hazardous waste treated/disposed in a foreign country, and per USEPA guidance, the identification of UHC's (if applicable) is not required for hazardous waste that is intended to be exported. Note however that if the exported waste is subsequently returned for treatment/disposal in the United States, all applicable LDR regulations would apply and a revised LDR notification would be required.
 - 4 = The waste meets the definition of hazardous debris pursuant to 40 CFR 268.2(h) and is intended for treatment/ disposal in compliance with the alternate debris treatment technologies of 40 CFR 268.45. In accordance with the requirements of 40 CFR 268.7(a)(2): the contaminants subject to treatment (CSTT's) must be identified as part of this notification. Identify CSTT's by completing Sections III and IV of CHI Form LDR-1 Addendum and
 - attach completed Addendum to this form. These constituents are being treated to comply with 40 CFR 268.45.

 The waste is a characteristic waste D003 Reactive Sulfide, Reactive Cyanide, or Unexploded Ordnance subcategory, a characteristic waste D012-17 wastewater, or a listed (i.e., F-, K-, U-, or P-code) hazardous waste. UHC's are NOT required to be identified.
 - 6 = The waste is a lab pack that is intended for incineration using the alternative lab pack treatment standard under 40 CFR 268.42(c). UHC's are NOT required to be identified; however, the generator must complete and attach the lab pack certification statement on CHI Form LDR-LP. Note that in accordance with 40 CFR Part 268 Appendix IV, lab packs which contain waste codes D009, F019, K003, K004, K005, K006, K062, K071, K100, K106, P010, P011, P012, P076, P078, U134, and U151 are not eligible for alternative lab pack treatment standard.
 - MOTE: IF THE WASTE IS A SOIL CONTAMINATED WITH A LISTED OR CHARACTERISTIC WASTE AND THE GENERATOR WANTS TO USE THE ALTERNATE TREATMENT STANDARD FOR SOILS, CONTACT CORPORATE COMPLIANCE FOR THE APPROPRIATE LDR NOTIFICATION FORM.

SECTION I. CHARACTERISTIC WASTES DOO1 THROUGH DO43 COLUMN 4: COLUMN 3: COLUMN 2: COLUMN 1: WASTEWATER/ HANDLING CODE WASTE CODE / SUBCATEGORY LINE ITEM NON-WASTEWATER SEE MANIFEST 1 2 3 () WW [] Non-WW [] D001 Ignitables, except High TOC subcategory 3 1 A High TOC Ignitable Liquids Subcategory [] Non-WW only [] D001 (Greater than or equal to 10% TOC) 1 2 3 4 () WW [] Non-WW Corrosives D002 [] D003 6 3 4 5 [] WW [] Non-WW Reactive Sulfide, per 261.23(a) (5) [] 4 [] Non-WW 1 3 () WW Reactive Cyanide, per 261.23(a) (5) 1 [] WW [] Non-WW 2 Explosive, per 261.23(a)(6), (7) & (8) [] Water Reactive, per 261.23(a)(2), (3) & (4) [] Non-WW only 1 [] WW [] Non-WW 1 3 Other Reactive, per 261.23(a)(1) 1 1 [] Non-WW 5 1 [] WW Unexploded Ordnance, Emergency Response [] [] WW 2 [] Non-WW 1 Arsenic D004 () [] WW [] Non-WW Barium D005 1 1 D006 () 1 2 3 [] WW [] Non-WW Cadmium [] 2 3 [] Non-WW only Cadmium Containing Batteries 1 1 2 () WW [] Non-WW Chromium D007 () D008 [] 2 3 4 1 { } WW [] Non-WW Lead [] [] Non-WW only 3 Lead Acid Batteries

p-cresol)

COLUMN 1:	ACTERISTIC WASTES D001-43 (CONTINUED) COLUMN 2: WASTE CODE / NAME	COLUMN 3: WASTEWATER/	COLUMN 4: HANDLING CODE
LINE ITEM	WASTE CODE / NAME	NON-WASTEWATER	
EE MANIFEST			
	[] D009 [] Low Mercury, less than 260 mg/kg Mercury	[] WW [] Non-WW	1 2 3 4
	[] Low Mercury, less than 200 mg/kg Herbert	[] Non-WW only	2 3 4
	[] High Mercury Organic Subcategory	[] Non-WW only	2 3 4
	[] High Mercury Inorganic Subcategory	[] WW [] Non-WW	1 2 3 4 6
	[] DO10 Selenium	[] WW [] Non-WW	1 2 3 4 6
	[] DO11 Silver	[] WW [] Non-WW	2 3 4 5 6
	[] D012 Endrin	[] WW [] Non-WW	2 3 4 5 6
	[] DO13 Lindane	[] WW [] Non-WW	2 3 4 5 6
	[] D014 Methoxychlor	[] WW [] Non-WW	2 3 4 5 6
	1 D015 Toxaphene	[] WW [] Non-WW	2 3 4 5 6
	() D016 2.4-D	[] WW [] Non-WW	2 3 4 5 6
	[] D017 2,4,5-TP (Silvex)	[] WW [] Non-WW	1 2 3 4 6
	() DO18 Benzene	[] WW [] Non-WW	1 2 3 4 6
	[] D019 Carbon tetrachloride	[] WW [] Non-WW	1 2 3 4 6
	[] D020 Chlordane	() War [] Non-WW	1 2 3 4 6
	[] D021 Chlorobenzene	[] WW [] Non-WW	1 2 3 4 6
	[] DO22 Chloroform	['] WW [] Non-WW	1 2 3 4 6
	[] D023 o-Cresol	[] WW [] Non-WW	1 2 3 4 6
	[] D024 m-Cresol	W [] Non-W	1 2 3 4 6
	[] D025 p-Cresol	[] WW [] Non-WW	1 2 3 4 6
	(1 po26 Cresol	[] WW [] Non-WW	1 2 3 4 6
	1 no27 1.4-Dichlorobenzene	[] WW [] Non-WW	1 2 3 4 6
	D028 1,2-Dichloroethane	[] WW [] Non-WW	1 2 3 4 6
	1 no29 1.1-Dichloroethylene	[] WW [] Non-WW	1 2 3 4 6
	[] D030 2,4-Dinitrotoluene	[] WW [] Non-WW	1 2 3 4 6
	[] D031 Heptachlor (and its epoxide)	[] WW [] Non-WW	1 2 3 4 6
	[] D032 Hexachlorobenzene	[] WW	1 2 3 4 6
	[] D033 Hexachlorobutadiene	[] WW [] Non-WW	1 2 3 4 6
	[] D034 Hexachloroethane [] D035 Methyl ethyl ketone	[] WW [] Non-WW	1 2 3 4 6
	and the second	[] WW [] Non-WW	
	and a shi a manhanal	[] WW [] Non-WW	
	The first and administration of the control of the	[] WW [] Non-WW	1 2 3 4 6
	t.l.amachhrilana	() WW () Non-WW	1 2 3 4 6
	and the state of t		1 2 3 4 6
	1 DO41 2.4.5-Trichlorophenol		1 2 3 4 6
	D042 2,4,6-Trichlorophenol		1 2 3 4 6
	D043 Vinyl Chloride	[] WW [] Non-WW	
	() 5013 1514		
SECTION II.	SPENT SOLVENT WASTES FOOT THROUGH FOOS		
SECTION 11.		COLUMN 3:	COLUMN 4:
COLUMN 1:	COLUMN 2:	WASTEWATER/	HANDLING CODE
LINE ITEM	WASTE CODE / CONSTITUENTS	NON-WASTEWATER	
SEE MANIFEST			•
200 144111		F005 [] WW [] Non-WW	3 4 5 6
	[] F001 [] F002 [] F003 [] F004 []	1005 ()	
	• •		
	1 N. F001-F005 [] 12. Cyclohexa	mone [] 2	s. Pyridine
1.1	1. ALL F001-F005 [] 13. o-Dichlor	mbensene [] 2	6. Tetrachloroethyre
i i	2. Acetone	151 (2005	7 Toluene
i i	3. Benzene		28. 1,1,1-Trichloro-
	4 n-Butyl alcohol		ethane
—— ; ;	5 Carbon disulfide	nzene ()	29. 1,1,2-Trichloro-
; ;			ofhane
			an wrichloroethylene
	8. o-Cresol		1 1 2-Trichloly
; ;		4 4	1 2 2-trifilior
		e Chioride	32. Trichloromonofluc
	n-cresol)		-athane
r 1	10 p-Cresol (difficult to [] 22. Helly2 2	sobutyl ketone	22 Yulene - mixed 1
\			(sum of o-, m-, a
	m-creenl) [] 24. 2-RICLOP	oropane (F005	p-xylene)
r	Only)		F
[]	(sum of o-, m- and		
	(cim of o-, m, and		

CLEAN HARBORS LAND DISPOSAL	ENVIRONMENTAL SERVICES, INC. RESTRICTION NOTIFICATION FORM LDR-1 Manife	st N	lo. 🗻						
SECTION III.	CALIFORNIA LIST WASTES								
COLUMN 1: LINE ITEM SEE MANIFEST	COLUMN 2: WASTE CODE / SUBCATEGORY		W	COLUMN ASTEWA WASTE	TER/	CO HAND	LUM		- •
	Hazardous waste containing one or more of the following California List constituents:	[]	ww	()	Non-WW	1 2	3	4	5 6
	[] ALL CALIFORNIA LIST CONSTITUENTS [] Liquids with nickel greater than or equal to 134 mg [] Liquids with thallium greater than or equal to 130 [] Liquids with PCB's > or = 50 ppm [] Waste containing HOC's > or = 1,000 mg/kg	/1 mg/1	L						
SECTION IV.	OTHER LISTED WASTES (F006-12, F019-F028, F037-38, F039, K-	, U-	, AN	<u> P-C</u> 0	DES)				
COLUMN 1: LINE ITEM SEE MANIFEST	COLUMN 2: WASTE CODE / SUBCATEGORY	. ,.	W	COLUMN ASTEWA -WASTE	3: TER/	HAND	LUM		-
		[4]	WW	[]	Non-WW	3	4	5	6
		[]	WW	[]	Non-WW	3	4	5	6
		[]	MM	()	Non-WW	3	4	5	6
		[]	WW	()	Non-WW	3	4	5	6,
		()	WW	[]	Non-WW	3	4	5	6
() CHECK H () CHECK H SECTION	ERE IF ADDITIONAL LISTED WASTE CODES ARE PRESENT. COMPLETE ERE IF WASTE CODE FO39 (MULTISOURCE LEACHATE) IS PRESEN S II AND IV OF CHI FORM LDR-1 ADDENDUM AND ATTACH COMPLETED	E ANU F. DADE	D ATT IDEN DENDU	ACH LI FIFY I M TO T	OR-1 CONT P039 CONS THIS FORM	INUATION TITUENTS	SHI BY	EET C	Ompletin
SECTION V.	CONTACT NAME AND DATE	T.	ate:						

KEY TERMS/DEFINITIONS

CLASS I SDWA SYSTEM means a Class I deep well facility regulated under the Safe Drinking Water Act (SDWA).

CWA SYSTEM means a centralized wastewater treatment facility discharging under a Clean Water Act (CWA) permit. For example, a CWA facility would treat organic or inorganic aqueous wastes and discharge the treated effluent to the local sewer system. Examples of CWA treatment systems owned and operated by Clean Harbors include the wastewater treatment operations at Baltimore (including the CES system), Bristol, Chicago, Cincinnati and Cleveland.

CWA-EQUIVALENT SYSTEM means a "zero discharge system"; that engages in "CWA-equivalent" treatment before land disposal. Zero-discharge facilities treat hazardous wastes using "CWA-equivalent" treatment methods, but do not discharge the treatment effluent to a sewer or water body (e.g., spray irrigation land farm). "CWA-equivalent" treatment methods means biological treatment for organics, alkaline chlorination, or ferrous sulfate precipitation for cyanide, precipitation/ sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or greater than these technologies.

HIGH TOC IGNITABLE LIQUIDS SUBCATEGORY means an ignitable liquid hazardous waste (waste code D001) which contains greater than or equal to 10% total organic carbon (TOC). Pursuant to 40 CFR 268.40, such wastes must be treated using organic recovery (RORGS) or combustion (CMBST) technology. Examples of RORGS technologies include the CES unif at Clean Harbors of Baltimore. Examples of CMBST technologies include hazardous waste fuel blending and subsequent reuse at a cement kiln, or destruction at a RCRA incinerator.

WASTEWATERS are wastes that contain less than 1% by weight total organic carbon (TOC) and less than 1% by weight total suspended solids (TSS). (See 40 CFR 268.2(f))

Manifest	No.	

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	TIRTADIONS	CONSTITUENTS	(UNC SI

- Check here if one or more of the constituents listed in Section IV below are reasonably expected to be present SECTION I. as an "Underlying Hazardous Constituent" in the waste. Then in Section IV, check off each constituent. Note that per the definition of UHC in 40 CFR 268.2, fluoride, selenium, sulfides, vanadium and zinc are NOT
- Check here if NONE of the UHC constituents listed in Section IV are expected to be present in the waste.

SECTION II. MULTI-SOURCE LEACHATE (WASTE CODE PO39)

- [] Check here if one or more of the constituents listed in Section IV are present as a constituent in the multi-source leachate (F039) waste. Then in Section IV below, check off each constituent. Note that constituents which are identified by an asterisk (*) are NOT regulated as F039 constituents. Check here if NONE of the F039 constituents listed in Section IV are present in the waste.

SECTION III. HAZARDOUS DEBRIS CONTAMINANTS SUBJECT TO TREATMENT (CSTT)

[] Check here if one or more of the constituents listed in Section IV is a CSTT for hazardous debris that is theck here it one of more of the laternate treatment technologies in 40 CFR 268.45. To identify CSTT's, refer intended for treatment using the alternate treatment technologies in 40 CFR 268.45. to the "Regulated Hazardous Constituent" column in the Treatment Standard Table in 40 CFR 268.40. Then, in Section IV below, check off the constituents that appear for each waste code used to identify the debris. Check here if the entry in the "Regulated Hazardous Constituent" column in the Treatment Standard Table in 40

CFR 268.40 is "Not Applicable", i.e. D001, D002, and D003 (non-cyanides subcategories only).

		n 0041	STITUENTS - INCLUDE MAN	IPEST LINE	ITEM	Ä		or a serious /slabs and games
SECTION IV.	msr o	r CON	cenaphthylene		72		[]	Chlordane (alpha and gamma
34			cenaphthene					isomers) p-Chloroaniline
35	- ;	-	cetone		73		[]	Chlorobenzene
36	;	-	cetonitrile				[]	Chlorobenzilate
37) A	cetophenone		75		[]	2-Chloro-1,3-butadiene
38) A	-Acetylaminofluorene		76		()	
39] 2	-ACECYTAMINOITEGE		77. 🗌		[]	Chlorodibromomethane
40		[] A	crolein crylamide (*)		78		[]	Chloroethane
41		[] A	crylonitrile		79		[]	bis (2-Chloroethoxy) methane
42.			ldicarb sulfone (*)		80.		()	bis (2-Chloroethyl) ether
251					81.		()	Chloroform
43			ldrin					bis(2-Chloroisopropyl)ether
44.			-Mutiton-E1		83.		()	p-Chloro-m-cresol
45			miline		84.		()	2-Chloroethyl vinyl ether (*)
46		•	Inthracene		85.		[]	Chloromethane (Methyl Chloride)
47			Antimony				()	2-Chloronaphthalene
48			Aramite				()	2-Chlorophenol
49.		(1)	Arsenic				[]	3-Chloropropylene
50			alpha-BHC				()	Chromium (Total)
51.			beta-BHC				[]	Chrysene
52.			delta-BHC				[]	o-Cresol
53.			gamma-BHC		92.		[]	m-Cresol (difficult to
252.		• -	Barban (*)					distinguish from p-Cresol)
54.			Barium		93.		[]	p-Cresol (difficult to
253		[]	Bendiocarb (*)					distinguish from o-Cresol)
255.		[]	Benomyl (*)		262		[]	m-Cumenyl methylcarbamate (*)
55		[]	Benzene				ii	Cyanides (Total)
		(1	Benz (a) anthracene		71.		ii	Cyanides (Amenable)
56		ii	pones chloride (*)		ys.		ii	
57		ri	Benzo(b) fluoranthene (difficult			ii	
58			o distinguish from		96.		ìi	1 2 Dibromo-3-chloropropane
			amen (k) fluoranthene)					
		٠,٠	Benzo(k) fluoranthene (difficult				nihwamamathane
59			to distinguish from		99.		[]	
		,	Benzo(b) fluoranthene)		100.			2,4-Dictiotobience/access
			Benzo(g,h,i)perylene		101.			
60		()	Bellzo (g, n, z) per justice				()	
61		()	Benzo(a) pyrene				1	
62.		[]	Berylium	5.4	104		ĺ] p,p'-DDE
63		[]	Bromodichloromethane	idal	105		(
64.		()	Bromomethane (Methyl	of owing)			•] p,p'-DOT
65.		()	4-Bromophenyl phenyl	ecuer	100		ĺ	
66		[]	n-Butyl alcohol	11/4	100	•	ì	
256		()	Butylate (*)	3		•	i	•
		ii	putul henzyl phthalat		109	•	i	· · · · · · · · · · · · · · · · · · ·
67		ii	2-sec-Butyl-4,6-dinit	rophenol "	110	•	-	p-Dichlorobenzene
68			(Dinoseb)			•	-	
			- ·			•	_	·
69		[]					ļ	1 1.1-Dichloroethane
257		[]			114			1 1,2-Dichloroethane
258		[]			119	5	-	1 1,1-Dichloroethylene
259		[])	116	6 ·		trans-1,2-Dichloroethylene
260				-	11'	7] 2,4-Dichlorophenol
70		()				в	ĺ	1 2,6-Dichlorophenol
71.		(11	9		1 1,2-Dichloropropane
261		(l Cathornian ()		12	0	1	1 cis-1,3-Dichloropropylene
					12	1	. !	l trans-1,3-Dichloropropylene

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[REVISED 09/10/98]

CLEAN HARBORS EN LAND DISPOSAL RE	STRICT	ON NOTIFICATION FORM LDR-1 A	DOENDUM	Manifest N	۰. ۔	
236		1,2,4-Trichlorobenzene 1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethylene Trichloromonofluoromethane 2,4,5-Trichlorophenol 2,4,6-Trichlorophenol 1,2,3-Trichloropropane	244		[]	1,1,2-Trichloro-1,2,2-trifluoroethal Triethylamine (*) tris-(2,3-Dibromopropyl)phosphate Vanadium (*) Vernolate (*) Vinyl chloride Xylenesmixed isomers (sum of o-, m-, and p-xylene concentrations) Zinc (*)

KEY TERMS/DEFINITIONS

CONTAMINANTS SUBJECT TO TREATMENT (CSTT) are the specific constituents listed by waste code number in the Treatment Standard Table in \$268.40. CSTT's must be identified for all hazardous debris wastes that are intended for treatment using one of the hazardous debris alternate treatment technologies described in \$268.45.

REASONABLY EXPECTED TO BE PRESENT means that the generator is relying on knowledge of the raw materials used, the process, and potential reaction products, or on the results of a one-time analysis for the entire list of UHC's that may be present in the untreated hazardous waste. If a one-time analysis of the entire list of UHC's is conducted, subsequent analyses are required for only those pollutants which would reasonably be expected to be present in the waste as generated, based on the previous sampling and analysis results.

UNDERLYING HAZARDOUS CONSTITUENT (UHC) means any constituent listed in \$268.48 Table UTS - Universal Treatment Standards (except fluoride, selenium, sulfides, vanadium and zinc) which can reasonably be expected to be present at the point of generation of the hazardous waste, at a concentration above the constituent-specific UTS treatment standard. [See 40 CFR 268.2]